



NETWORKWORLD

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March 2, 2009 ■ Volume 26, Number 9

What does a real green data center look like?

Companies looking for a green data center model should take a look at Internap's new facility, which is so environmentally efficient it got \$453,000 from the power company. **Page 12.**

Microsoft fights economic doldrums

Despite the gloomy economy, Microsoft has big plans. **Page 16.**

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Sneak peek: Microsoft's Windows 7 Enterprise

BY TOM HENDERSON,
NETWORK WORLD LAB
ALLIANCE

NEW YORK — In a series of briefings last week for product reviewers, Microsoft detailed the features that will be included in its Windows 7 Enterprise edition when it is released later this year.

This high-end bundle will have all the bells and whistles befitting a corporate client operating system, including support for scripted PowerShell commands for easier centralized management, help desk-friendly tricks and desktop virtualization options.

Specifically designed for use in large organizations with volume licensing deals, the enterprise edition of Windows 7 will be reliant on Microsoft's group policy controls and Active Directory service advancements.

According to the enterprise strategy outlined by Microsoft product managers during the New York event, Windows 7 Enterprise will come with a wide variety of tools that should resonate with network and system administrators. Some will be bundled in the base price while

See Windows 7, page 20

Juniper steps up its data center attack

BY JIM DUFFY

SAN MATEO, CALIF. — A sluggish economy is a perfect time for slugging it out in the data center.

That seemed to be Juniper Networks' rally cry at its annual analyst conference last week as the company launched an aggressive campaign to expand its enterprise business with a targeted assault on the data center. Juniper disclosed that it is working with partners on a multiyear project to develop a converged switching fabric for the data center, and unveiled a top-of-rack 10 Gigabit Ethernet switch optimized for low latency server access.

The developments come against a backdrop of a sputtering worldwide economy



“We are going to partner for success in the data center.”

Pradeep Sindhu
Juniper CTO

in which overall IT spending is expected to drop by as much as 15% from last year, according to Juniper CEO Kevin Johnson. Johnson would not speculate on when he

See Juniper, page 30



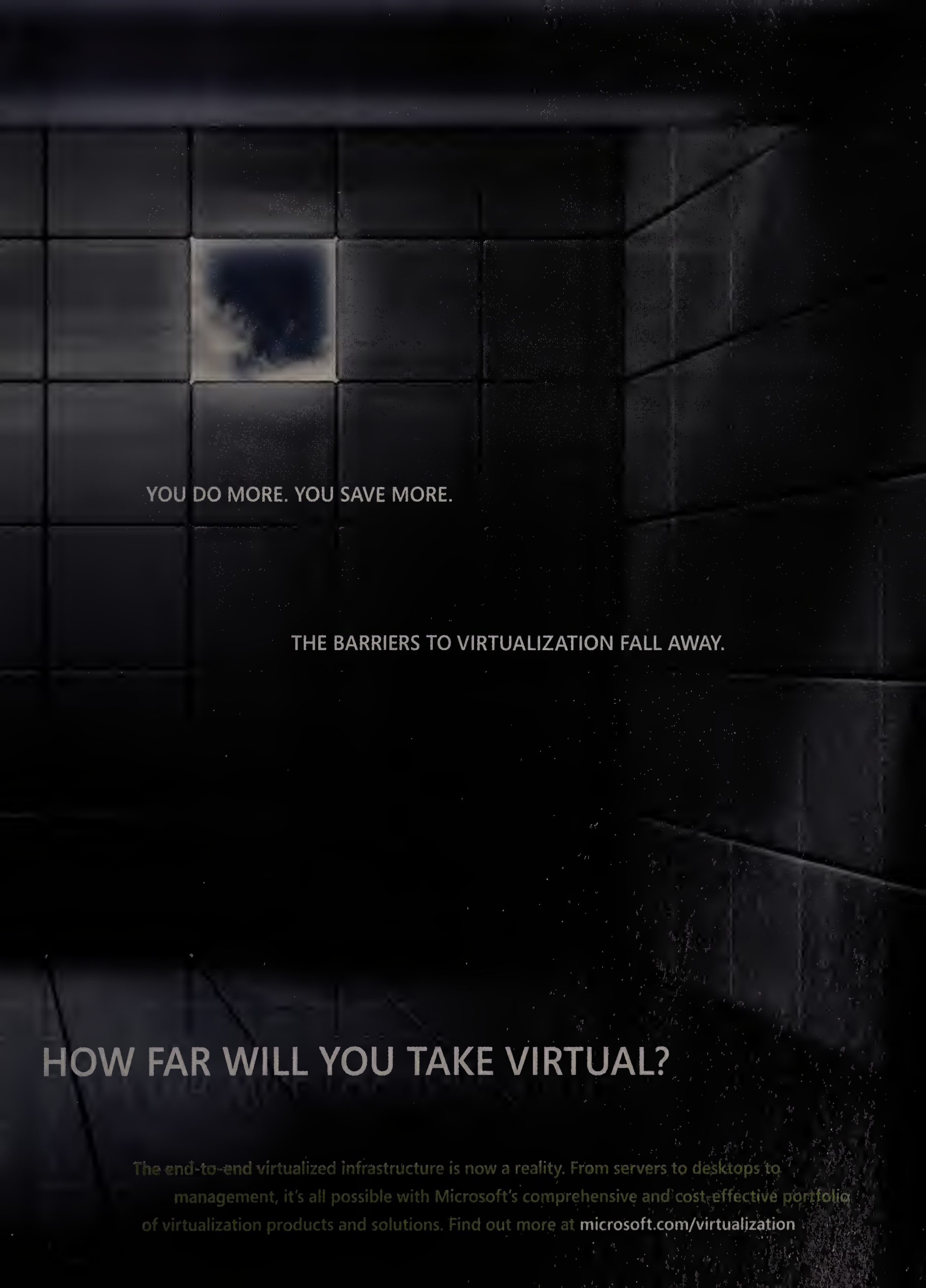
SOA governance
clashes with cloud
computing model.

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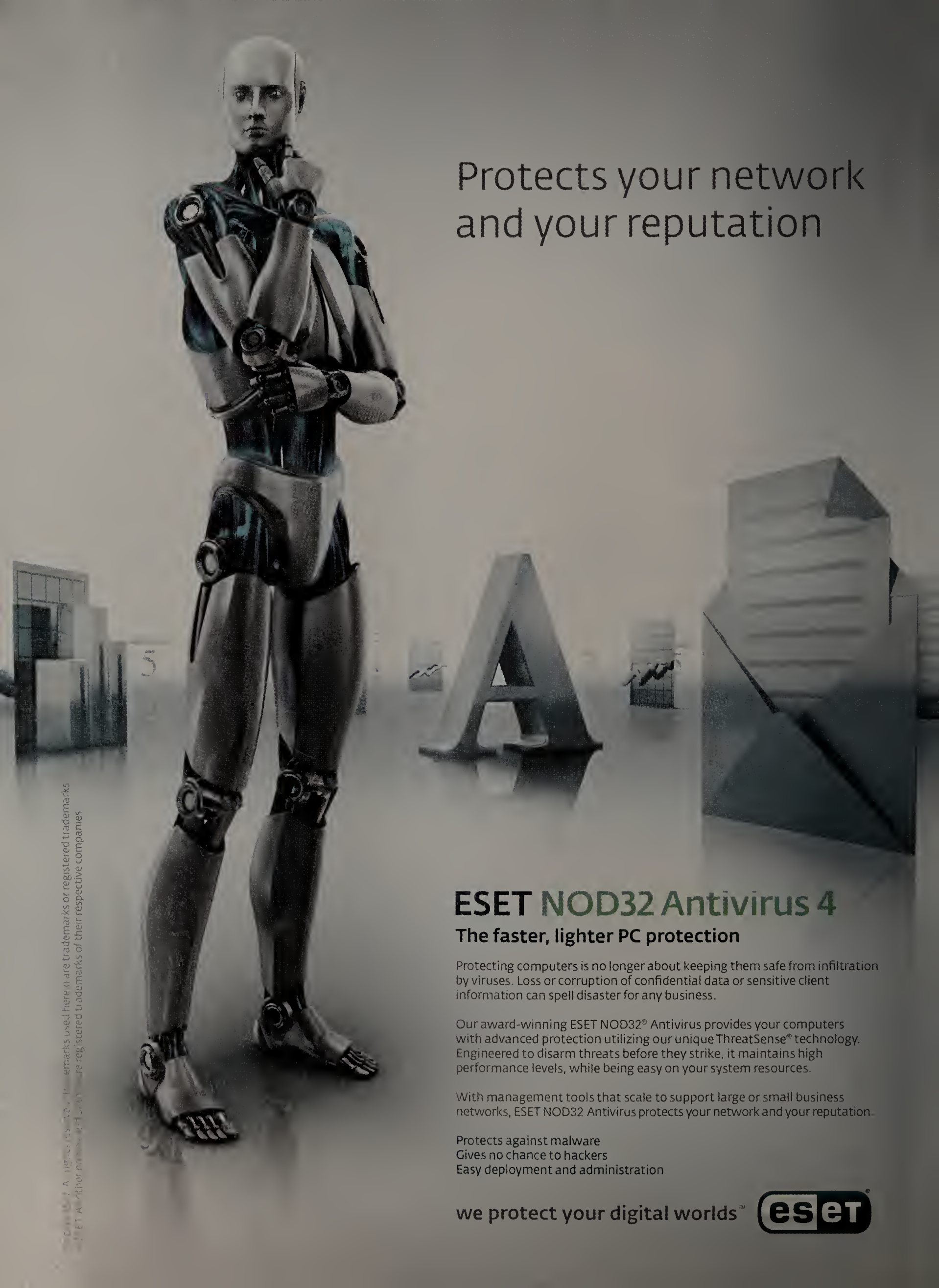


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COOLTOOLS

■ **Callpod's portable Fueltank** lets you recharge multiple devices at the same time. See Cool Tools, page 22.

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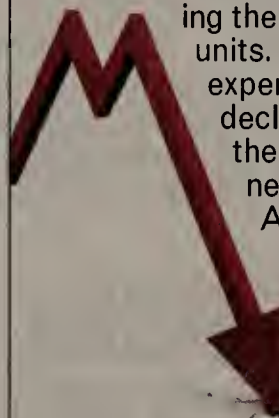
AT&T not skimping on network

AT&T will invest \$1 billion this year to expand and upgrade its global network with a particular emphasis on adding business applications such as managed hosting, content delivery and telepresence. AT&T says the investment will be targeted at expanding its business service offerings to both small and large companies. Broadly speaking, AT&T has divided its investments into categories: IBM network integration, global network expansion, application delivery and mobility services.



Even servers not immune

Worldwide server revenue saw its biggest quarterly drop in years in the last quarter of 2008 and may not recover until next year, IDC says. Server revenue witnessed a sharp 14% year-over-year decline to \$13.5 billion for the fourth quarter. The decrease was partly driven by a drop in server shipments, which fell by around 12% during the quarter to 1.9 million units. "The server market experienced its sharpest decline since the middle of the dot-com slowdown nearly seven years ago.



All server vendors, geographies and technology segments were impacted significantly as the global recession gained momentum and

market conditions weakened as the quarter progressed," said Matthew Eastwood, group vice president of IDC's Enterprise Platforms Group.

Google under attack

Not only did Google's Gmail suffer a two-and-a-half hour outage on Feb. 24, but Google's e-mail service shortly afterwards was invaded by a phishing scam that used instant messaging to dupe unsuspecting users into giving up their passwords.



STORM CLOUDS AHEAD

SOA governance clashes with cloud computing model.
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Painful network management: It's a sore subject

Re: Jimmy Ray Purser's blog post "Network Management stinks" (www.nwdocfinder.com/8932): Packet Trap works well. But the sales e-mails from those folks are immense. Solarwinds is almost as nice, is more expensive, and they tend to quit trying to sell you add-ons after a few months. HP's solution is certainly not one. That NNM is kludged together badly.

The problem when I relate any of these packages to smaller networks is that they are just way too expensive when the ratio of their usefulness vs. their cost comes under consideration. But any of the open source solutions I have tried (Nagios/Groundworks, Cacti, Netflow) also come with an added cost factor of having to get in and meddle and tinker, because that is either time a client has to pay for or that I have to eat as a consultant.

It's hard to talk a small shop (fewer than 250 workstations) into implementing any network management/monitoring solution when things seem to be running fine, even though some pointed tuning could greatly improve network performance. For too many of our clients it is many times cheaper and usually easier to justify bumping bandwidth over spending a few thousand dollars to install a good NMS.

And it's almost impossible to teach them how to properly use one when they rely on you to set up Outlook or their chosen terminal client because they are too busy trying to do their regular duties in the first place.

ode

Microsoft's failing leadership

Re: Mitchell Ashley's blog post "Were Microsoft layoffs political or necessary?" (www.nwdocfinder.com/8933): [Who wouldn't agree] that a 2% to 3% (net) layoff on a 10% to 20% revenue decrease isn't a token gesture and political? I'd love to hear your alternative explanation. And yes, management used to make a lot of money for themselves, pass some of that to employees, and investors benefited. But that was the 1990s. In this decade, they have continued to make a lot of money for themselves while employees just get by and shareholders have lost staggering amounts. You

talk about the stock having "stabilized" over the past five years. It's -37%. That isn't stable. Over 10 years it's -55%. That is one of the worst performances of any well-known technology company. Today, it's looking to close at an 11-year low. What Wall Street figured out, and earlier than most, is that the company is failing under its present leadership. Until that's addressed, the stock will continue down.

Anonymous

When data centers are hot

Re: Curious about the temperature specs (www.nwdocfinder.com/8935): Raising the thermostat does save energy. As you know, there is debate about what is the "right" temperature. At higher temperatures, the servers rely more heavily on internal fans to keep them cool. And while manufacturers say these devices can operate at the higher temperatures, you may want to make sure their MTBF predictions take this into account (just because it won't void the warranty doesn't mean it is the right thing to do). Fans that are running constantly will fail faster. Components driven at higher temperature will fail faster.

Besides premature hardware failures, you also need to make sure there is a sufficient bank of cool air available in the event of a power failure. Because the UPS only supplies power to the IT equipment (not to the air conditioning), temperatures can rise quickly with loss of power, especially in the higher density racks. When this happens, the systems may shut down or fail. In either case, you must take into account your implementation for mirroring/redundancy as well as your business model.

For companies that own and operate their own data center, they can decide what risk is acceptable to their organization. In a highly mirrored site like Google, periodic hardware failures are not a big deal. Other companies with more centralized systems for financial services, e-commerce and public safety are generally unwilling to take this risk.

Michael Bullock

E-mail letters to jdix@nww.com or send them to John Dix, editor in chief, Network World, 492 Old Connecticut Path, Framingham, MA 01701-9002. Please include phone number and address for verification

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Securing Your Web World

BLOGOSPHERE

■ **Will Tom-Tom lawsuit further distance Microsoft from Linux crowd?** Mitchell Ashley writes in his *Converging on Microsoft* blog: "Three of the suit's claims are related to Linux running in Tom-Tom devices. It's interesting Microsoft would take this action and while it's not a direct assault claiming broad Linux patent infringements, the claims against Tom-Tom's Linux are direct enough to surely garner the attention of Linux and other open source advocates. I'll be interested to see how much press this story gets, given Microsoft may have more to lose by winning vs. losing." www.nwdocfinder.com/8928

■ **Revealed: Surprises in the Q4 08 Ethernet switch market.** Brad Reese writes in his *On Cisco* blog: "This week data networking and telecom research firm Infonetics released a report on the fourth quarter Ethernet and application switch market, revealing a few surprises. According to Matthias Machowinski, Infonetics Directing Analyst for Enterprise Voice & Data: "The North American Ethernet switch market was actually up both sequentially and year-over-year (up 2.6% in 2008 over 2007, and up 1.4% quarter-over-quarter in the fourth quarter), somewhat surprising given that this region is generally blamed for the current worldwide economic woes." How so? Well according to Machowinski: "Manufacturers were able to shift the sales mix to higher priced products. If this trend sustains, it should help with profit margins in what is expected to be a tough year ahead." www.nwdocfinder.com/8930

■ **iPhone, Mac, Touch users at Princeton plagued by flakey Wi-Fi connections.** John Cox writes in his *On Wireless* blog: Princeton University iPhone and iPod Touch users, as well as Macintosh PCs, are being plagued with Wi-Fi connectivity issues on the campus network, according to a story this week in the *Daily Princetonian*, the independent student newspaper. The problems, affecting "many students," began last September, and there's been a "large increase" in failed or flakey connections since then, apparently caused by the way some applications make use of the network. According to a Web posting from Princeton's Office of Information Technology, the problem is caused by devices that end up running multiple Dynamic Host Configuration Protocol (DHCP) clients on a single network interface at the same time. As a result, the device can end up using several IP addresses that DHCP has assigned to other devices, disrupting their access to various network services, including the campus wireless LAN. www.nwdocfinder.com/8931

INTERVIEWS, THE COOLEST TOOLS AND MORE

ITvVIDEO

IDG NEWS WIRE:



Microsoft Tech-Fest: The low power data center

Microsoft Research hopes to make data centers more efficient. They are testing a prototype data center that runs off of low-power processors.

www.nwdocfinder.com/8922

IDG NEWS WIRE:



iPhone controls concept car

Swiss automobile design house Rinspeed will unveil a concept electric car controlled by an iPhone at next week's Geneva Motor Show.

www.nwdocfinder.com/8923

PANORAMA PODCAST:



Why ex-employees are stealing your data

Larry Ponemon talks about a study that showed 59% of employees who had quit, were fired or laid off admitting to stealing company data.

www.nwdocfinder.com/8924

BEST OF NWW'S NEWSLETTERS

Lessons from a light socket

Wireless: When I was first struggling to learn about computer networking standards, a friend with the IEEE boiled the whole thing down for me with a light bulb analogy. "You just want things to work," he sagely observed, pointing above our heads to a hanging light fixture. "Plugging a light bulb into a socket shouldn't be a complicated, dramatic deal. Same thing for networks." Those words came flooding back to me last week when a simple, but potentially mighty, announcement came out of GSMA Mobile World Congress. At long last, mobile phone chargers might actually get standardized. www.nwdocfinder.com/8925

Tech exec: There's a quiet revolution taking place in the science of computer chip technology. Within a few years, this revolution could impact everything from the portable devices we use to the way we encrypt sensitive information. Some experts call the revolution the extension of Moore's Law, the principle which dictates that the number of transistors that can be placed on an integrated circuit doubles every couple of years. It has proven to be true for at least 50 years, but the law might hit the limitations of physics in the next decade or so. If Moore's Law is about to hit the wall, what's next on the horizon? Probabilistic computing is the next big thing, and it's being developed by a team of scien-

tists at Rice University in Houston and Nanyang Technological University in Singapore. The team recently demonstrated a proof of concept microchip with remarkable results. The microchip has the ability to deliver a 30x improvement in energy consumption while simultaneously delivering a 7x improvement in speed over conventional computer chips. www.nwdocfinder.com/8926

WAN: A couple of years ago, the world was abuzz with fear of an influenza pandemic. This has obviously been supplanted in most people's minds by the financial crisis pandemic. There are some preparedness steps that can help you survive both. One of the most significant advances in the past few years is the availability, affordability, and functionality of collaboration and teleconferencing software. These tools now enable you to be "at work" no matter where you are physically, given that you have appropriate network capabilities and security measures. So what's the economic crisis tie-in? According to our recent 2009 Network Plans and Priorities State-of-the-Market report, staff headcount is one of the areas that will be significantly affected in the coming year, with 8% of the responding companies anticipating some level of increase and 45% anticipating some level of decrease. www.nwdocfinder.com/8927

ECONOMY MEETS ECOLOGY.

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A man in a dark suit and tie walks from left to right, carrying a briefcase and holding a white cup. He is walking past a large, grey, textured wall with circular indentations. To the right of the man, several cartoon animals are visible: a blue bird, a purple bird, a yellow butterfly, a brown rabbit, a small brown squirrel, a large spotted deer, and a black and white striped skunk. There are also some red flowers in the foreground.The IBM logo, consisting of the letters "IBM" in a stylized, bold, sans-serif font, with a registered trademark symbol (®) to the right.

Check Point overhauls security software

Check Point is in the midst of a major overhaul of its security software architecture so customers can pick and choose the applications they want and dedicate computing resources to each depending on performance objectives. The company has taken the first step with the latest R70 version of its software that separates various applications — firewall, VPN, Web filtering, intrusion detection/prevention systems — into software blades that are available to customers a la carte or in pre-packaged bundles. In addition, Check Point is working toward being able to dedicate part of the computing power of multi-core processors to a single application, starting with its IDS/IPS platform. Check Point calls this dedication of computing power Core XL and plans to extend it to its other security platforms over time. Eric Ogren, a security analyst with the Ogren Group, says that the software-blade architecture holds the promise of focused security applications with recommended policies preset and ready to go out of the box. www.nwdocfinder.com/8938

Red Hat targets VMware, Microsoft with virtualization line. Red Hat last week introduced an entire line of virtualization software aimed at disrupting the current market by giving customers an open source option for virtualizing their data centers. The line includes the built-in virtualization of Red Hat Enterprise Linux operating system as well as two virtual-machine management products — one for desktops and one for servers. Red Hat also is offering a stand-alone hypervisor called Red Hat Enterprise Virtualization. Red Hat purchased virtualization software vendor Qumranet last September and the new offerings are based on some of the technology from that deal. They also represent a migration from the Xen hypervisor, on which Red Hat based the virtualization included in RHEL 5, to the kernel-based virtual machine hypervisor. KVM is based on the Linux kernel and is designed for high performance and stability. www.nwdocfinder.com/8939

HP to distribute, support Sun's Solaris. HP and Sun — fierce competitors when it comes to hardware sales — unveiled an expanded partnership last week that will see HP become a key distributor of Sun's Solaris 10 operating system. HP will distribute and provide support for Solaris on its ProLiant server and blade platforms (but not its Integrity line of servers), and the two companies will work on integrating Solaris 10 with HP's Insight software. Solaris could no doubt benefit from the partnership as it battles for share against Windows and Linux. But in turn, HP may simply have been hewing to market forces, according to one observer. "This was largely about pragmatism," said Stephen O'Grady, an analyst with Redmonk. "There are a lot of HP customers that want to run Solaris." Sun previously signed Solaris distribu-

tion deals with IBM and Dell in 2007. www.nwdocfinder.com/8940

Open source SharePoint rival debuts. Open source vendors Ingres and Alfresco are teaming on a software appliance that bundles the Ingres database with Alfresco's content management platform, hoping the combination will prove to be an enticing alternative to Microsoft SharePoint. The two vendors have already bundled their products but decided to go a step further with the appliance, which adds a Linux operating system and can be installed on commodity hardware. The appliance will also give customers a single point of contact for support, which Ingres will provide. Ingres will charge \$32,500 per CPU for subscription support per year for the appliance, with CPUs counted by the socket. The ECM appliance should provide "an attractive choice" for customers in the market for collaboration tools, as well as systems integrators who want to build alternatives to SharePoint, according to The 451 Group analyst Matthew Aslett. www.nwdocfinder.com/8941

Court reinstates Nacchio's conviction. An appeals court has reinstated the insider-trading conviction of former Qwest



Communications CEO Joseph Nacchio, rejecting an attack by his attorneys on a federal judge's handling of the trial. Nacchio was convicted in 2007 in connection with the sale of more than \$100 million of Qwest stock in 2001. He was sentenced to six years in prison and fines of \$19 million, and ordered to repay \$52 million from stock trades. Nacchio's legal team challenged the conviction, arguing in part that expert testi-

mony from a law professor about Nacchio's stock-trading patterns should have been allowed. A three-judge panel of the U.S. Court of Appeals for the Tenth Circuit last year reversed Nacchio's conviction and granted him a new trial. His sentence was stayed and he was released pending the appeal. But the full court of nine judges re-examined the expert testimony issue and last week, in a 5-4 decision, it ruled that the testimony was excluded properly. In addition to reinstating Nacchio's conviction, it revoked his release from prison and the stay of his sentence. www.nwdocfinder.com/8945

Dell records 48% drop in net income. Dell's net income dropped 48% for the fourth quarter, the company said last week, as it also announced it is increasing its cost-cutting goal to \$4 billion (up from \$3 billion) by the end of fiscal 2011 as it tries to come to terms with the recession. The company recorded net income of \$351 million for the fourth quarter ended Jan. 30, a 48% drop from the \$679 million it recorded in last year's fourth quarter and well below the \$496 million that analysts polled by Thomson Reuters had expected. Revenue fell to \$13.4 billion, a 16% drop from a year ago, and short of analyst estimates of \$14.2 billion. The steps Dell has taken in the past to cut costs include compensation reduction, staff cuts, restructuring its product design and distribution, and realigning its manufacturing strategy by shutting down factories. Similar measures will probably be taken to meet the additional \$1 billion cost-cutting measures by the end of fiscal 2011, wrote John Spooner, senior analyst at Technology Business Research, in a research note. "We expect Dell's belt-tightening to involve additional layoffs and plant closings within the company's North America organization," Spooner wrote. www.nwdocfinder.com/8943

Microsoft takes first crack at high-end data warehousing. Microsoft began its run at the high-end data warehousing market with the release of SQL Server Fast Track Data Warehouse, a set of reference configurations. Fast Track, a result of last year's DataAllegro acquisition, is the first step on the road to realizing Microsoft's project called Madison, a highly scalable database technology that will be available in an appliance. The Fast Track configurations, which have been pretested on platforms from Bull, Dell and HP, push the scalability of SQL Server as high as 32 terabytes and are designed for users who want to build data marts. Madison is designed to scale to petabytes, supports high-speed queries and is targeted at companies looking for highly scalable data warehouse technology. Fast Track is available now. In the first half of next year, Microsoft will unveil its first Madison appliances. www.docfinder.com/8944



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Visit a real green data center

BY TIM GREENE

Companies looking for a green data center model should take a look at the new facility Internap built in Somerville, Mass., just outside Boston, which is so environmentally efficient that the local power company wrote it a rebate check for \$453,000.

A renovated warehouse building that most recently housed a 5,000-member church, the collocation facility is optimized to economically meet demands for cooling, humidity and power consumption that are common to all data centers.

Internap expects that the data center will save another \$400,000 every year by using less power than it would have had it not been built to green specifications, says Mike Higgins, vice president and general manager of Internap's data center services. That is helpful to its bottom line as well as keeping down rates it charges customers, he says.

To meet increasing demand for power in data centers, the facility is designed to provide 150 Watts per square foot across the entire raised floor space, and that is upgradable to 300 Watts per square foot. Typical customers have access to 240-280 Watts per square foot because aisles and common areas draw not power — a significant boost to the 60 Watts per square foot specification widely used a few years ago.

Data center power consumption in the United States doubled between 2000 and 2006, according to the Environmental Protection Agency, so paying attention to efficient use of power helps address wider concerns about the ability to provide enough electricity to meet general demand. Gartner says that by 2011, power consumption could double again from 2005 levels if businesses don't take steps to make data centers more efficient.

Efficiency and reliability at the Internap data center are key to Carbonite, the first customer to rent space in the facility. Carbonite is a venture-backed start-up that sells cloud-based backup services to consumers and soon to small businesses.

The design of the Internap site gave Carbonite confidence that its environmental needs — power, cooling, humidity — would be met, says Rob Rubin, vice president of engineering for Carbonite. Heat and humidity have a direct impact on how long disk drives last, and the better those factors are controlled, the longer their storage disks last, he says. That has a direct impact on Carbonite's bottom line.

The 45,000-square-foot Internap building has 16,300 square feet of usable data center space and has a separate section ready to build out into a second space of the same size, according to Karl Robohm, principal with Transitional Data Services, which consulted on the project.

One key to efficiency was deciding well



A heat-reducing harmonic mitigating transfer is flanked by Karl Robohm (left), principal of Transitional Data Services, and John Willard, president of Complete Energy Solutions.

ahead of time what equipment to install before turning building design over to architects and engineers, Robohm says. That meant taking the time to find which gear would best serve efficiency goals. "We didn't pay any more money, we just went out and did some research," he says.

The first step was finding the six rooftop cooling units that keep temperatures in the data center space at 70 degrees Fahrenheit, plus or minus 2 degrees. Robohm looked at gear from six vendors but found only one that met the rebate specifications of the power company, NSTAR, which has a program for paying rebates to its customers that use energy-saving infrastructure in their new construction.

Internap saved money by buying the units itself rather than having the contractor buy them at a markup, he says. That also ensured that they would be on hand so construction wouldn't grind to a halt waiting for them to be delivered.

The units, which have traditional air-based cooling coils for capital budget reasons, will be upgraded to more efficient water coils and chiller plant later on, says John Willard, president of Complete Energy Solutions, another consultant on the project. Internap will then gain efficiency across a wider range of outside air temperatures and will still have the air-based units available for backup and redundancy. "It's green today, but it can get even greener in the future," Willard says.

The simple choice of roof color saves money as well. White reflects more light, which means the roof is cooler and doesn't generate heat that seeps into the building just to be pumped out and cooled.

Also in the cooling mix are enormous vents

called economizers that can let in outside air as part of the effort to keep temperatures down in the data center space. The economizer can also be used to eject hot air directly out of the building rather than cooling it through the rooftop units. But proper use of economizers requires careful calculations, Robohm says.

Cool outside air has relatively low humidity, which encourages build up of static electricity that can wipe out servers. So using the economizers has to be coordinated with generating humidity within the building to keep down static charges, Willard says.

To handle this calculation, the facility has an energy management system that he calls the brains of the building. The system's sensors measure inside and outside temperature, inside and outside relative humidity and air pressures within the cooling ducts and the space below the data center floors where the cool air is delivered. "You have to have the whole building thinking as one," Willard says.

Preventing inside humidity from dropping below 40%, plus or minus 5%, falls to ultrasonic humidifiers that generate a cool mist. The alternative way to provide the moisture is using steam canisters that heat water to create steam that humidifies the air.

The savings of the cool humidification system are dramatic, using 93% less energy than the steam gear, Willard says. In another Internap data center facility that formerly used somewhere between 90kW and 135kW to power steam humidifiers, switching to the ultrasonic technology cut that number to 9kW, he says.

The ultrasonic gear doesn't use energy to heat the water; it's sprayed at the temperature it arrives from the tap. The mist absorbs some of the heat generated by electronic gear in the data center, and because it's mist not steam, doesn't add heat to the equation.

To improve the efficiency of humidity control, the entire building was sealed inside by plugging up obvious air spaces and spraying a vapor barrier on the walls so moisture doesn't escape through them. "You want the air to go where you want it to go," Robohm says.

Internap wants the cool air pushed from the roof to a 3-foot space below the data center floor, where air pressure forces it up through vents in the flooring. The vents are evenly spaced in rows that allow placement of standard-sized equipment cabinets between them, creating cold aisles.

The front sides of the servers face these cold aisles and their fans draw the cool air across their heat-generating components. The heated air is pushed out the back to hot aisles that have return gratings in the ceiling directly over them. The gratings lead to a 6-foot space above

See Internap, page 14

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Innovations on display at DEMO

Launchpad for emerging technology kicks off Monday

BY JON BRODKIN

A sleek touch-screen laptop, a voice-to-text service for the iPhone, and various tools to help employees work more efficiently are being unveiled at *Network World's* DEMO 09 conference in Palm Desert, Calif. this week.

A start-up called Always Innovating will reveal the Touch Book, a portable device that works both as a netbook with a small keyboard and a touch-screen tablet. About the size of an 8.5-by-11-inch sheet of paper folded in half, the Touch Book is for those times when the iPhone isn't quite enough but a notebook computer is too big, says DEMO Executive Producer Chris Shipley.

Based on open source hardware designs, the Touch Book weighs two pounds, offers "never-before-seen battery life," and is ideal for typing e-mail, opening an Office document, or playing games and watching videos, according to DEMO's company guide.

"This device will find a ready market among people who want a more capable read/write device with which to navigate cloud computing," DEMO says. "And with its ARM processor, Linux and commodity components, we won't be surprised to see an ecosystem of applications grow up around this product."

Always Innovating will be one of about 40 companies demonstrating new products and services on Monday and Tuesday at DEMO, a show targeting emerging technology.

While the show has a big focus on consumers, it will also showcase numerous tools IT pros and businesses may find interesting.

Symantec will launch Project Guru, which will appeal to IT pros whose family and friends expect them to solve all their technology problems. The project is a Web-based remote support tool that lets "tech savvy individuals" provide remote support to family and friends.

"It's kind of like the nerd in every social group," Shipley says. "It's software that is going to make it easy for you to provide remote long-distance support for all the people who count on you to do it."

Business users of the iPhone might be interested in ShoutOUT, a voice-to-text Short Message Service (SMS) application that will soon be available in Europe.

"Built on Promptu Systems Corporation's powerful speech-recognition technology, ShoutOUT lets users dictate messages in natural language, quickly check their text message and send the SMS to their intended recipients," DEMO says.

ShoutOUT sends the speech file to a remote

server for transcribing, but lets users review the transcribed message for errors before sending to intended recipients. While the product is targeted at the consumer market, it could be useful to business users especially if it is extended to e-mail and calendaring, as the company promises.

"The iPhone is going to come into businesses whether businesses want them to or not," Shipley notes.

Businesses looking to improve collaboration may be interested in Cc:Betty, a DEMO company that aims to make e-mail conversations more pro-

ductive by sorting through messages and parsing "conversations, files, images, media, dates and places, in the spirit of saving time while collaborating and coordinating with groups of people."

"We're conducting more and more business dialogs via e-mail, a tool that is great at delivering information, but not so effective when it comes to parsing and organizing it," according to DEMO.

Cc:Betty turns e-mails into Web-based collaboration spaces, and be useful "across a variety of business and personal productivity applications," DEMO organizers say.

Businesses having trouble organizing legal documents may want to check out Document Depository Corporation, which has made a hosted service that handles storage, tagging, sharing and retrieval, while giving companies the benefits of disaster recovery.

"It's a really clean, easy way to do document management," Shipley says. "It really resonated with me because we were ripping through file drawers at DEMO."

Speaking of disaster readiness, a DEMO presenter called Transformyx is unveiling RallyPoint, a Web-based crisis communication system designed for businesses in hurricane-, earthquake- and terrorist-prone areas.

"By combining all modes of standard communication with the Web and a touch-tone-based phone system, RallyPoint can quickly and accurately provide secure communications and accountability between management, employees, clients, vendors and even the media," DEMO says.

Another business-focused product to be unveiled at DEMO is Pixetell, an online software platform that lets you deliver mixed-media presentations that combine screen recordings, voice, Webcam, rich text and attachments, through existing channels such as e-mail, blogs, wikis, instant messages and Twitter.

DEMO will feature several technologies designed to make e-commerce easier, including

Zipadi, a software-as-a-service platform that helps integrate digital publishing, e-commerce and CRM. The idea is to make online shopping interfaces more attractive by combining "rich media publishing with back office management that allows merchants large and small to make their catalogs truly interactive," according to DEMO.

In a sign of the economic times, this week's DEMO features only about half as many presenters as DEMO 08. Many start-ups are cutting back on engineering and lengthening development timelines, Shipley says. But there is still room for new, innovative ideas, particularly those that enable people to be more efficient and do more with less.

"Even if it's only 40 companies, we want to make sure it's 40 quality companies," Shipley says. "I am really optimistic about this class of 40 companies because they're so focused on delivering customer value and building businesses around these products." ■

Internap

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the ceiling where the hot air is ejected or sucked into the rooftop units for cooling.

The Internap facility further reduces heat generated in the building through use of harmonic-mitigating transformers to step down the voltage to usable levels. These transformers operate 25% more efficiently than conventional K-factor transformers. By operating at 98% to 99% efficiency, very little electricity is wasted in the voltage conversion process saving on both electricity and cooling.

Even the lighting in the facility is low powered and turns on with motion sensors. If Internap collocation customers want more light for their space within the data center, it can be added later. The high-performance lighting reaps an additional 10% to 15% savings in power and will earn another rebate from the power company, Willard says.

Overall design of the facility makes it possible to have a wide-open data center floor free of any gear needed to deliver power, control temperature and add humidity, all of which would generate heat within the space, Robohm says. Freestanding cooling units also eat up floor space for their footprints plus buffer zones around them.

Internap retrofits some of its other eight data centers with technologies used in its new facility, but it is difficult to make wholesale changes in operating data centers that are full of customer gear, Higgins says. But the lessons learned at the Somerville location will be used as the company builds its future sites, he says. ■

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Financial services firms like ours are very dependent on the use of email and Web connectivity to conduct our business. As the Director of information technology I have to make the security of those channels my top priority.

And as the use of the domain name system to conduct attacks, steal data and interrupt business has increased, so has our need to monitor our communication channels. In this new environment, using standard command line tools to detect and fix critical problems, particularly in a crisis, is no longer an option. It's time consuming and costly. And frankly, that's time I don't have and a cost my firm can't afford. Like any smart IT guy I look for the most efficient solution to solve a problem. That's why I absolutely depend on DNSstuff to stay on top of my domain management responsibilities and fix a DNS problem fast in a crisis. DNSstuff is rock solid and reliable; an every day tool that I can't afford to be without. I can make DNS changes quickly, manage my domains with ease, and run a report in seconds. And DNSstuff's 24 hour alert service helps me detect critical changes before my users do.

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Microsoft on the prowl

Economic downturn not taking toll on CEO Steve Ballmer's plans

BY JOHN FONTANA

Microsoft last week outlined its intent to stand and fight against a difficult economy with a plan to go after competitors and seize market share in areas such as netbooks, mobile devices/services, browsers, databases and even search/advertising.

Microsoft CEO Steve Ballmer last week walked financial analysts through the company's annual mid-fiscal year update on its strategic thinking, striking a bit of a conciliatory tone but making it clear he's organizing to fight.

"You don't beat it. You manage in this environment," Ballmer said. "We need to then really ask the question: What do we invest in, what's important, what's going to happen?"

What's going to happen, experts say, is that Microsoft, as always, is going to be on the offensive with its extensive line of products and business interests ranging from Windows to Xbox.

Ballmer speak

"This is Ballmer saying we think our strategy is working and we are not going to change it or the areas of investment," says Matt Rosoff, an analyst with independent research firm Directions on Microsoft. "They look at this as time to expand and take share from companies that are weaker fiscally. Microsoft has cash, they have incredible profit margins, they are doing pretty well."

In the first half of fiscal year 2009, Microsoft posted \$31.7 billion of revenue, which was up 5% over the same time period last year, and \$11.9 billion in operating income. The company reported in December that it had nearly \$20 billion in cash.

"If you look at the numbers, just the raw numbers, it was actually a very good first half," said CFO Chris Liddell, who appeared last week with Ballmer at the financial analysts meeting in New York City.

Ballmer said Microsoft will seek to grow its share in various markets that it has been in for years including mobile and databases, and attack new markets such as netbooks and entry-level servers.

Some of the company's effort will be to protect market share, as is the case with the upcoming Internet Explorer 8, some will be to gain market share, as in its ongoing battle to steal database customers from Oracle, and some will be a massive uphill battle like search and advertising where Google dominates.

Ballmer announced that Windows 7 would be available on netbooks and said Microsoft is working on a low-cost, low-functionality entry-level server called Foundation Edition.

And he said Office 14, slated to ship next year, client access licenses and a high-end version of SQL Server would be foundations to sell

Mid-year gut check

Microsoft last week laid out its mid-fiscal year business outlook and said the economic downturn and declining PC sales would be a major challenge for the company. It is planning to lean heavily on corporate buyers that have been fueling its server and tools business over the past few years.

Strategies

Grow marketshare across product lines.

Introduce a low-cost, low functionality server called Foundation akin to netbook concept on PCs.

Ramp up efforts around Windows Mobile.

Continue to hunt Google in search/advertising market.

Challenges

Top hurdles include convincing strapped corporate users to step up to more expensive versions of software; stabilize browser marketshare with the introduction of Internet Explorer 8; and grab database customers at the expense of Oracle.

Will buyers repeat the netbook phenomenon on the server side? If so, when Microsoft spills Foundation's details they better be compelling.

Will low-cost smartphones finally bring a big chunk of the market to Microsoft? Part of the answer will hinge on closely aligning PC and mobile platforms.

How much money will Microsoft bleed in a business CEO Steve Ballmer says the company cannot leave?

into corporations.

The opposite of gloom

Despite Ballmer's gloomy assessment of overall economic conditions his words exposed his poker face.

"I tell our people, I don't know why you get grim, even in a down economy we could take share, maybe especially in a down economy it's time to take share," he said.

In addition to growing share and revenue, Ballmer talked about reducing operating costs and being smart with investments. He said Microsoft's "little corporate strategy group" researched annual reports of various companies from 1927 through about 1938 and found those that invested during down cycles prospered when better times returned.

Microsoft has a R&D budget of \$9.5 billion for this year. And it plans to spend \$14 billion in sales and marketing.

"That is so Microsoft for them to go that deep with analysis and plan their strategy not around gut feelings but around what has been successful for other companies and to do it so methodically," said Al Gillen, an analyst with IDC.

Gillen says Microsoft certainly understands the down side, but "they also see opportunity, Microsoft sees weakness in competitors, Microsoft sees opportunity to invest when others will pull back. They have the cash to do it.

They can invest significantly over the next two years even if the market is soft. So I think we can expect that Microsoft will try to come out of this stronger and not weaker."

The telltale sign of any Microsoft success will come over the next 12 to 18 months and beyond.

Ballmer outlined where the opportunities would be by focusing on Microsoft's "seven big businesses," and he provided strategies to grow share and build revenue through what he called "revenue realization," which he said isn't about pricing but about selling more things to the same customers, such as replacing pirated copies of Windows with licensed versions. But he also said Microsoft would try to move corporate users to newer and more powerful versions of Microsoft software.

Seven signs

The seven businesses where Microsoft will focus are Windows, Windows Mobile, desktop productivity especially Office, server, enterprise software especially SQL Server, search/advertising and entertainment/TV.

Some of Microsoft's strategies center around adding a netbook version of Windows 7, a 2010 release for Office 14, the low-cost, low-functionality Foundation Edition server slated to appear in the next year or so, a high-end version of SQL Server called DataCenter and a ver-

See Microsoft, page 20

Techies end-run feds on DNSSEC

Authentication alternatives proliferate as U.S. delays signing of Internet root

BY CAROLYN DUFFY MARSAN

Forty years ago, when the U.S. government created the packet switching network that became the Internet, one of its goals was to create a robust network where traffic would be dynamically routed around blockages.

Now the Internet engineering community has developed a strategy to route around a different kind of blockage — one that is political rather than technical — and one that has been caused by the U.S. government itself.

At issue is the deployment of security mechanisms for the Internet's Domain Name System, which matches domain names with corresponding IP addresses.

The Internet engineering community wants to deploy DNS Security Extensions (DNSSEC) to prevent hackers from hijacking Web traffic and redirecting it to bogus sites. DNSSEC uses digital signatures and public-key encryption to allow Web sites to verify their domain names and corresponding IP addresses. DNSSEC is viewed as the best way to bolster the DNS against vulnerabilities such as the Kaminsky bug discovered last summer (and about which Dan Kaminsky spoke at last week's Black Hat event in Washington, D.C.). It's because of DNS threats such as these that the U.S. government is rolling out DNSSEC across its .gov domain.

Despite its efforts to deploy DNSSEC on .gov, the U.S. government is delaying widespread DNSSEC deployment by failing to cryptographically sign the 13 "root" servers that operate at the pinnacle of the Internet's hierarchical DNS. The root servers make it possible for top-level domains including .gov, .com and .net to resolve DNS requests for names registered in these domains.

Last fall, the U.S. government sought comments from industry about how best to deploy



“Signing the root has two benefits: from a technical perspective, it means that layer is signed. Politically ... that sends a powerful signal that DNSSEC is for real and everyone should do it.”

Steve Crocker
CEO of Shinkuro

DNSSEC on the root zone, but it hasn't taken action since then. Internet policy experts anticipate further delays because the Obama Administration only last week named Gary Locke as Secretary of Commerce, a position in which he will oversee Internet addressing issues.

Meanwhile, the Internet engineering community is forging ahead with an alternative approach to allow DNSSEC deployment without the DNS root zone being signed. Known as a Trust Anchor Repository, the alternative was announced by the Internet Corporation for Assigned Names and Numbers (ICANN) last week.

ICANN's Interim Trust Anchor Repository — or ITAR — allows top-level domains such as .se for Sweden and .br for Brazil to have fully functioning DNSSEC deployments without waiting for the root zone to be signed.

ICANN officials were quick to say that their Trust Anchor Repository would be disabled as soon as the U.S. Department of Commerce requires root zone operators to deploy DNSSEC.

“The ideal scenario is that the root zone is signed,” says Kim Davies, manager of root zone services for ICANN. “Currently, we have a situation where the root isn't signed, which is largely a political discussion. And in the immediate future, it is not likely that we'll have a signed zone. So we're looking at what's the next best thing.”

ICANN's ITAR serves as a central clearinghouse for top-level domains to share their DNSSEC public keys. The ITAR publishes the public keys for each participating top-level domain in a single file on a regular basis so that domain operators can validate against the latest security information.

“This is a temporary service until the root is signed,” Davies says. “It's kind of a stop-gap measure. Technologists would agree that it is not ideal, but it is the best we can do for now.”

ICANN's ITAR has been operating in test mode since October. Fifteen top-level domains are using ITAR, including some domains such as .gov and .museum that are experimenting with DNSSEC. ITAR is available free to top-level domain operators through ICANN's Internet

Assigned Numbers Authority.

ITAR proponents say it will encourage domain name operators to forge ahead with DNSSEC deployments without worrying that their efforts to authenticate DNS queries will be stymied because the root zone isn't cryptographically signed.

“I don't think ITAR is as scalable as having the root zone signed, and it's not a replacement for having the root zone signed. But it does make early adopters have an easier time deploying DNSSEC,” Davies says.

The ITAR comes with some risk. Some argue that its existence could slow DNSSEC deployment. Others say that it could end up on the Internet forever, which would complicate DNSSEC deployment.

While ICANN's ITAR is aimed at top-level domains that deploy DNSSEC, other Trust Anchor Repositories are being developed for lower levels of the DNS hierarchy.

Internet pioneer Steve Crocker, CEO of Shinkuro, says Trust Anchor Repositories are a “necessary piece of scaffolding to permit DNSSEC to work smoothly during the lengthy transition period until most of the [DNS] tree is signed.”

Even if the U.S. government mandates that the DNS root zone is cryptographically signed, the most popular top-level domains for online business — .com and .net — haven't adopted DNSSEC. However, VeriSign, which operates both of these domains, has promised to deploy DNSSEC across all of its top-level domains within two years.

Until .com is signed, if an individual company with a .com address wants to deploy DNSSEC to protect its Web site from hijacking attacks, it needs a Trust Anchor Repository that operates at the .com level.

But even the biggest proponents of Trust Anchor Repositories would rather see DNSSEC deployed on the DNS root and top-level domains such as .com and .net.

“Signing the root has two benefits: from a technical perspective, it means that layer is signed,” Crocker says. “Politically, as soon as the root is signed, that sends a very powerful signal that DNSSEC is for real and everyone should do it.” ■

CORRECTION

■ In the Clear Choice Test “Juniper SRX 5800: Biggest firewall ever” (Feb. 23, page 1), problems in the testbed were only uncovered long after testing was completed. We did not identify these issues with the testbed in time to stop the inaccurate results from being published in the print edition of this article. Those results (which appear on page 17) should be disregarded. We apologize to both Juniper and to our readers for the error. We hope to work with Juniper to re-test the SRX firewall/IPS while under attack so that we can better determine system performance in that use case.

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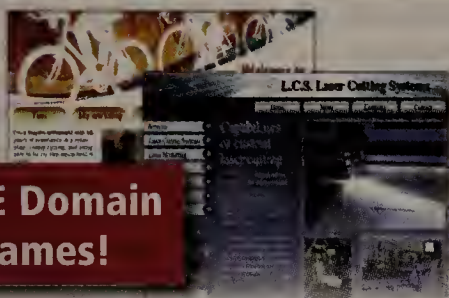
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Windows 7

continued from page 1

the base price while others will come with an added fee.

Microsoft has been criticized for not yet including enough enterprise features in its widely distributed Windows 7 beta code.

The set of free Windows 7 tools demonstrated at the reviewers briefing don't seem to rely on Microsoft's ever-smoother administration GUI at all — they're based on Microsoft's command-line scripting system, PowerShell 2.0, which will come bundled with Enterprise edition.

Microsoft is also including more than 500 scripts and 'commandlets' with PowerShell. While PowerShell 1.0 has been in XP and Vista in the past as it's been around since 2006, it has been upgraded so that these commandlets can take advantage of enhanced group policy controls that affect everything from system security to Microsoft Sharepoint accessibility.

The scripts — which can be executed on a Windows 7 client or Windows 2008 server and then propagated as needed to administrative domains — are designed to help system administrators build and deploy tailored group policies that are easier to understand and manage than those set up with previous versions of Windows clients and servers. Microsoft is banking on better adoption of group policies for everything from security and compliance to user-driven mobility services.

When Windows 7 Enterprise users are logged to Microsoft's Active Directory Services, administrators can use PowerShell policy directives to push, multicast-style, immediate changes and updates to group policies to logged on users. These pushed remote policy executables can perform rudimentary functions such as adding network shares or applying regular updates as well as emergency operations such as closing ports to block zero-day vulnerabilities.

The optional enterprise-focused Windows 7 features will come via Microsoft's existing Desktop Optimization Package (MDOP). Microsoft will be delivering features such as Direct Access (an IPsec-based VPN-less VPN), BitLocker enhancements (including encryption of removable devices), Branch Cache (single instance file stubbing to unclog WAN traffic), Federated Search (multiple source file/folder/content indexing for search), as well as App-V ('location-less application loading') and Med-V (Microsoft Enterprise Desktop Virtualization). The MDOP mix also extends to traditional 'enablers' for network management applications, such as an application authenticator (AppLocker).

The Windows 7 Enterprise also will have several help desk tricks built into it. One of them, called Problem Steps Recorder, lets a user to record steps taken when things go wrong, so a problem can be demonstrated to help desk personnel without an often-required remote access session. An example shown during the briefing started a macro recorder that tracked each step in an application failure. The recording was made in HTML that could be subse-

quently viewed — click by click — on any modern browser. The page can be e-mailed so that malfunctioning applications and conditions can be documented for tech support and quality assurance purposes.

The Automated Troubleshooting feature in Windows 7 Enterprise (think network troubleshooting) has been vastly revamped (especially in terms of wireless connectivity troubleshooting). Microsoft has shipped Diagnostic (troubleshooting wizards) with both XP and Vista. Windows 7 adds on-demand Diagnostics that can be loaded from policy-defined resources and locales. Libraries of them can be ostensibly built, and they can use PowerShell-driven resources as well as those developed via Microsoft's Diagnostic authoring tools.

This feature can also include third-party application/component troubleshooting steps alongside the familiar troubleshooters found in XP and Vista. And the trouble processes can be combined to help solve a problem that would require multiple steps, such as first getting a Wi-Fi connection established and then getting an application to work properly.

Windows 7 Enterprise includes the first major revamp of performance and state monitoring through the addition of the familiar Win-Internal application suite.

Windows 7 Enterprise virtualization — which will all be delivered under the optional MDOP — has four possible configurations: presentation virtualization (video, perhaps audio, keyboard and mouse), desktop virtualization (Hyper-V and Virtual PC product-based), profile virtualization (user states and configuration), and application virtualization.

Application virtualization, via Microsoft's Softicity acquisition — is the most interesting

prospect here. This process allows application sandboxing — which is execution of applications on external servers — in a seamless fashion as though the application is running on the local machine. This trick, called Coherence by competitor Parallels, sends keyboard, video and mouse commands from the Windows 7 client to the application — and back — from the host where the application is being executed. Users aren't aware that the application (and ostensibly the data) doesn't reside on their own hardware.

Expected Windows everywhere?

With the description of what is included in Windows 7 Enterprise bundle, it's clear that Microsoft has taken to heart the fact that Vista hasn't been strongly adopted in the enterprise.

It is also clear that Microsoft is not veering very far from its homogenous underpinnings.

Little was mentioned about how Linux and Apple machines might co-exist with Windows 7 in an overall enterprise picture. Mainframe accessibility from a Windows 7 client wasn't talked about. Corporate Windows 7 Enterprise netbook plans weren't cited during the discussion, nor were the integration of varying mobile phone devices.

Additionally, in order to manage Windows 7 machines in the enterprise, Microsoft was trying to build a case not only for greater administrative controls to end points, but an organizational buy-in to Windows 2008 Server and its overall Systems Center management platform.

Henderson is principal researcher for ExtremeLabs of Indianapolis. He can be reached at thenderson@extremelabs.com.

Microsoft

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sion that runs on the cloud operating system Windows Azure.

Microsoft plans to make enterprise customers an important part of its strategy, and Ballmer said Microsoft would look at up-selling existing customers on such things as client access licensing, and on products such as a high-end SQL Server version slated for delivery in the next 12 months.

Microsoft's other plans include attacks on the low-end of the PC and server where it has not typically played. Netbooks are an emerging market that Microsoft has been targeting. A Windows 7-based netbook will help ramp up that effort.

And the Foundation Server hopefully will appeal to users in small or emerging markets where Linux has been satisfying needs. On the mobile side, Microsoft will try to take advantage of users switching from feature phones to smartphones with a low-cost alternative in that market.

"I do think the guys in the best position are the guys with phones at low price points,"

Ballmer said.

Microsoft plans to focus on corporate buyers as it preps to roll out Office 14 next year.

Ballmer said enterprise buyers bring the greatest Office revenue "because we attach more value. We help the user log-in, we help IT manage the desktop, we help with collaboration, we run e-mail."

And Ballmer ticked off new technologies that Microsoft will sell into the enterprise including security management, identity management, authentication, next-generation portal, collaboration and conferencing.

In the area of enterprise software, Ballmer said Oracle would be on its radar. The company, he said, has higher revenue share in the database market, but that Microsoft leads in unit share, and given the economy, "I think the time to take share from Oracle, who recently raised prices, has never been better."

In search/advertising, Ballmer said Microsoft would not give up against Google and he even said he would again explore a partnership with Yahoo, which he firmly said would not include an acquisition, in order to catch Google. ■

Getting network baselining right

BY TIM MCCREERY

While simple in concept, network baselining is often misunderstood. Baselining involves recording network traffic and performance, saving it for future reference and/or reviewing it to see traffic patterns.

By understanding the behavior of a network and what has happened historically, one can begin to solve problems that arise. Baselining makes it easier to identify network attacks (internal or external) and even the people causing problems (staffers downloading movies at work, for example).

But the reality is less than 5% of administrators make a practice of baselining, for reasons such as "we don't have the time to do baselines" or "things change too much to do baselines" or "I'm not going to hire a person or multiple people to keep baselines organized." These all stem from misconceptions.

Consider the economics of foregoing baselining. Change on a network can cost thou-

sands to millions of dollars. For example, adding bandwidth to a network with multiple sites and WAN links to a thousand or more stores might increase costs by \$500 to \$1,000 per site. It is imperative that organizations size their networks based on legitimate traffic before adding such significant recurring costs.

While theoretically there could be thousands of baselines, the key is deciding what baselines are important to the organization.

There are many macro-level baselines to consider, such as how much bandwidth is going out to the Internet, and then there are more granular views: What protocols are going across the network? How much bandwidth does a particular application use in general? What is latency

on the network for a particular application? Consider starting with this basic list.

- All traffic on backbone links.
- All traffic on WAN links.
- All traffic to the Internet.
- All traffic for particular business critical applications.
- All traffic to/from critical systems.
- All systems backup traffic.
- All of the above for each location if multiple locations exist.

The security side of baselines also is important. Changes in the environment will reflect security posture because certain databases, applications, data and devices should only be accessed from particular locations, IP addresses, networks or people. By spending a few moments to create baselines for these entities, it takes only an instant to see if someone tries to access those protected resources. Similarly, change management and compliance issues should have baselines to back up the assumptions that are made about what is happening in that network environment.

Also consider what should be baselined. Some people use baselining to understand and monitor network traffic in off hours and odd times in efforts to identify attack patterns. Others focus on how applications tax the network. Before implementing baselines, it's crucial to determine the purpose and goal.

If the goal is security-related, consider the following list of baselines:

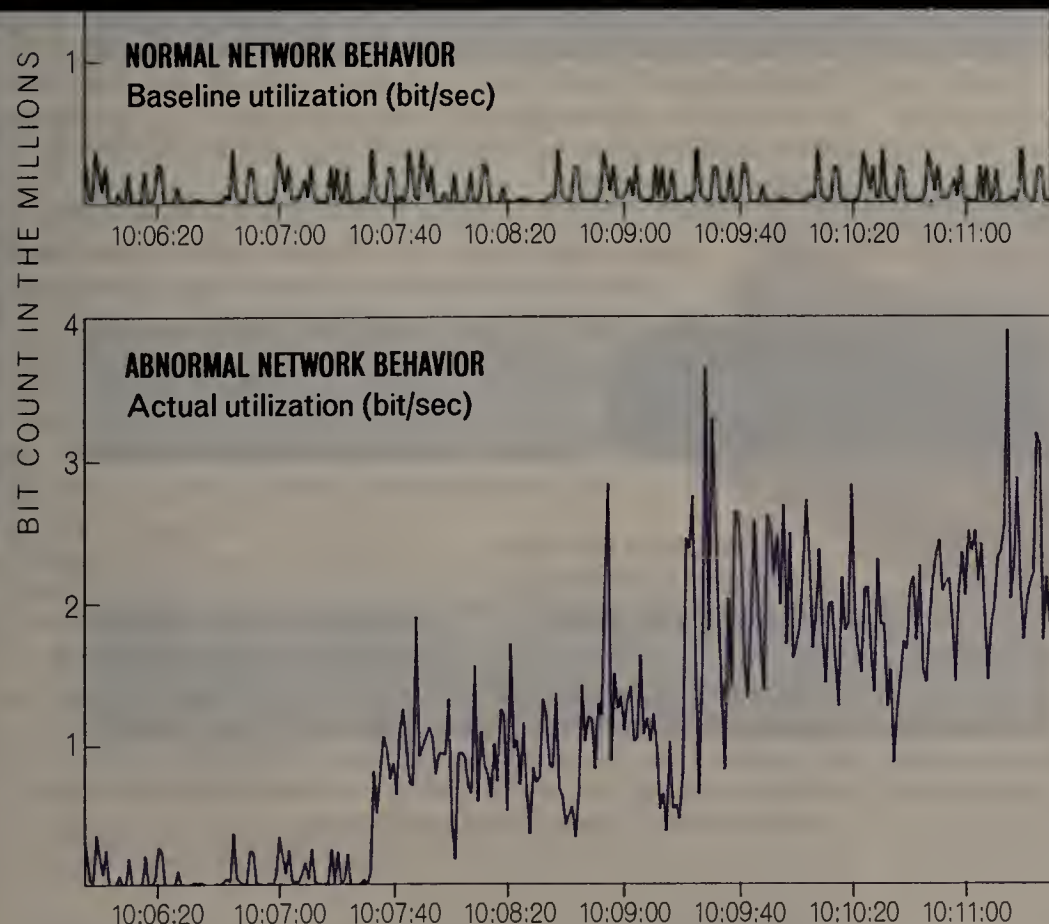
- All conversations that originate in a DMZ.
- All traffic to/from network/security devices.
- All VPN traffic after decryption.
- DHCP traffic from unknown DHCP servers.
- Mail traffic not sent to your mail servers.
- DNS traffic not to your DNS servers.
- Any internal addresses not matching your address space.

It takes just a little time and money to automate the baselining process, and results are invaluable to network management. Every aspect of your network that you understand substantially increases your chances to fix your next problem in seconds, rather than hours. Quicker resolution equates to less downtime, which equates to less dollars lost. That is where the true ROI of baselining can be seen.

McCreery is WildPackets president and CEO. He can be reached at tim.mccreery@wildpackets.com.

Baselines shine a light on abnormal conditions

Establishing a baseline of normal network behavior is critical if you want to quickly troubleshoot performance bottlenecks and isolate suspicious activity. Without a comparison it is impossible to tell if traffic patterns are normal. With a baseline and historical reference it becomes very evident when something is amiss.



This vendor-written tech primer has been edited by Network World to eliminate product promotion, but readers should note it will likely favor the submitter's approach.



GEARHEAD

Mark Gibbs

Wrapping up TiddlyWiki

Over the past few weeks I've been exploring the free, open source, personal, portable, browser-based wiki system called TiddlyWiki, one of the most brilliant ideas I've seen for a long time.

Last week I discussed two of the five key TiddlyWiki components (macros and plugins), so we have just one more to cover, cookies. Browser cookies are small data files that are uploaded and downloaded to and from Web sites to store persistent site-specific information. In the case of TiddlyWiki, cookies store configuration details, such as the wiki author's name and where backup files are located, so they can be used across multiple local browser sessions. While this data could be stored in a tiddler (a page or document) it would mean that someone else using a copy of that TiddlyWiki would, erroneously, inherit the original author's configuration details.

The way that TiddlyWiki uses cookies when run locally reveals an interesting technical detail: The cookies use file URLs (as opposed to the usual http URLs). Cookies with file URLs are supported by most modern browsers but are not well documented and it's worth noting that the Google Chrome browser doesn't support them.

Now that we have most of the important parts of TiddlyWiki covered we can look at the bigger context of these systems. As I explained two weeks ago, many TiddlyWikis are available online. If you want to use their content — which might be macros and plugins as well as text-based — rather than cut and paste the content, you can import from them.

In your TiddlyWiki (or mine on Tiddlyspot you'll notice at the top right-hand corner of the user interface a link labeled "backstage"). Click on the link and a menu will open across the top of the display offering a number of system management options.

One of these options is "import". Trying to import tiddlers into an online TiddlyWiki won't work because of the limitations imposed by the "same origin" policy used by most JavaScript implementations (this prevents cross-site scripting. If you try the same operation, importing from an online or offline TiddlyWiki into a local TiddlyWiki, it will work fine as the policy doesn't apply to scripts and content loaded from file URLs.

What the import service looks for are tiddlers in the target TiddlyWiki. Tiddlers are formatted as follows:

```
<div title="Tiddler_Title" modifier="Tiddler_Author"
  created="yyyymmddhhmm" modified="yyyymmddhhmm"
  changecount="n" tags="tag1 tag2 ..." >
<pre>Tiddler_Content</pre>
</div>
```

You are then offered a list of all tiddlers found and you choose which to import. On the backstage menu there's also a sync option which, if you imported tiddlers with the "save details" option, allows you to update your copies from the original tiddlers at any subsequent time.

With such predictable formatting you might guess that content can be easily imported and exported in other forms. Thus many third-party developers have created TiddlyWiki plugins that export content, such as RSS feeds and HTML pages, as well as others that import Twitter tweets.

If you try TiddlyWiki, you'll want to test the different versions offered by TiddlySpot and you have to install the TiddlySnip Firefox extension. TiddlySnip turns a TiddlyWiki into a scrapbook — just right click in a page and you can save the content to your TiddlyWiki.

The sheer scale and richness of the TiddlyWiki world is remarkable and its potential in organizations as a means of distributing content and encouraging collaboration is enormous.

Your TiddlyWiki explorations to gearhead@gibbs.com.



Keith Shaw

COOLTOOLS

Refueling portable devices simultaneously

The scoop: Fueltank, by Callpod, about \$70 (currently on backorder).

What it is: This portable device is about the size of a portable USB hard drive, and contains a rechargeable lithium ion battery, which the company says has more than seven times the capacity of a standard mobile phone. With device-specific adapters, users can recharge a number of different portable devices, including

iPods, the iPhone, mobile phones and other gadgets. The company says voltage regulator technology in the Fueltank can sense the amount of power required to charge each device. A button on the Fueltank indicates how much juice it has left, and the device itself can be recharged via a wall adapter (included), car charger (sold separately), or the company's other charging device, the Chargepod.

Why it's cool: The ability to recharge two devices simultaneously saves you some space in the laptop bag if you want to recharge, say, your iPod and a mobile phone. The amount of "fuel" in the Fueltank is pretty impressive — I was able to recharge several devices before needing to grab the device's power adapter.

Some caveats: Like the company's Chargepod, the tiny adapters tend to get lost or misplaced if you're not careful — luckily the device comes with a carrying case for storing the Fueltank and whatever adapters you need. It comes with one adapter that covers Motorola, BlackBerry, Jabra, the TomTom, Garmin and mini-USB devices, but for iPod/iPhone adapters, you'll have to purchase them through the company's Web site.

Grade: ★★★★★ (out of five)

(Amazon.com).

What it is: It's a keyboard with built-in stereo speakers. Buttons on the keyboard include mute, volume control, play/pause, stop and next/previous tracks. Another button provides a backlight for the keyboard (individual keys aren't backlit, just the space under the keyboard — you know, the space where all of your food crumbs end up). A bass boost button amplifies the sound of the speakers, in case you're not happy with the volume up button.

Why it's cool: If you have a PC system that didn't come with separate speakers, or a monitor that doesn't have speakers with them, then integrated keyboard speakers may be just for you. The speakers extend upward from the top part of the keyboard — it's a nice design, but definitely bulkier than some of the slimmer keyboards I've seen recently. The keys themselves are silent — no clickety-clack sounds, which is a benefit. After all, if you're jamming along to your favorite music while typing, the last thing you want to hear is "click clack click clack". I also like the addition of a headphone and microphone jack on the back of the keyboard —

Callpod's Fueltank allows you to recharge multiple devices at once.

most likely you'll be using this with a desktop system, and connecting a microphone or headphones to the keyboard is more convenient than to the desktop. I also laughed when following the "Let's Get Started Guide", which has exactly one step: "1. Connect keyboard cord to USB port."

Some caveats: If you already have speakers on your desktop system or integrated into your monitor, why would you want these? Answer: You wouldn't. Move on.

Grade: ★★★

Shaw can be reached at kshaw@nww.com.

The scoop: Tune Board keyboard, by Verbatim, about \$72

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STORM CLOUDS AHEAD

SOA governance clashes with cloud computing model

BY JAMES KOBIELUS

C


Cloud computing, which refers primarily to an on-demand service delivery model that may span both outsourced and premises-based platforms, is the hot, new paradigm.

But cloud computing is causing discomfort among some IT professionals, who are concerned that cloud-based services may fall outside the scope of established service-oriented architecture (SOA) governance initiatives.

After several grueling years of implementing life-cycle controls over their Web services environments, these IT pros worry they may have to radically revamp those efforts to keep pace with rogue adoption of outsourced cloud services.

SOA governance, also known as service governance, refers to practices and tools for enforcing consistent development, security, performance and other policies across the life cycle of key functions, regardless of whether they are hosted internally or provided by outsourcers.

Effective SOA governance is extremely important. It enables organizations to consistently plan, design, validate, publish, provision, monitor, modify, secure and optimize their distributed environments. And it ensures that services deployed in enterprise application environments — be they built on clouds, mainframes or any other platform — comply with regulatory, policy, operational and other baseline requirements.



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SOA governance key to cloud control

In one sense, cloud computing could be the best thing to happen to SOA governance. That's because the existence of cloud computing makes governance all the more critical.

In theory, clouds can deliver almost every IT capability — from applications down to middleware, application platforms, and even storage, processing and other hardware resources — as on-demand subscription offerings.

But how does an IT executive provide sound management in a cloud computing world?

"The cloud revitalizes interest in governance because you are extending trust to services across premise and presumably corporate boundaries," says Miko Matsumura, vice president and deputy CTO at Software AG. "Not only is that significant from a governance perspective, but the complexity of mashing up cloud services with on-premise applications, integrations and infrastructure requires a framework for maintaining overall integrity."

In other words, clouds complicate the SOA governance picture. Without proper governance, anyone could deploy a new cloud service at any time, and anyone could invoke and orchestrate that service into ever more convoluted messaging patterns.

In a governance-free environment, coordinated cloud service planning and optimization becomes frustratingly difficult. In addition, rogue cloud services could spring up and pass themselves off as legitimate nodes, thereby wreaking havoc on the delicate trust that underlies production SOA.

Simply put, cloud services can circumvent even the best-laid service governance practices. By enabling rapid no-touch outsourcing of many or all IT functions, cloud services make it very difficult for enterprise IT to enforce policies governing service composition, integration, security, management and other key functions.

Furthermore, cloud services often differ so fundamentally from enterprises' core SOA environments that IT professionals may not be sure what governance best practices — if any — are best suited to this new environment.

Many of the components that organizations have deployed in support of Web services, such as service registries and service-level management agents and consoles, are partly or entirely lacking from many public or private cloud environments.

From the viewpoint of SOA professionals, cloud environments are potential breeding grounds for undocumented, unsupported and non-standard application services.

In addition, outsourced cloud services may not conform to any of the Web services standards — such as XML, Simple Object Access Protocol (SOAP), Web Services Description Language (WSDL) and Universal Description Discovery and Integration (UDDI) — upon which IT has built the enterprise's internal SOA.

Like creeping kudzu, rogue public-cloud-based services can become firmly ensnared in an IT environment and resist all efforts to extricate them. Once those uninvited guests are

firmly ensconced, enterprise IT may find itself severely hamstrung in its attempts to monitor or rein them into conformance with standard practices for service designing, maintaining, monitoring, securing and versioning.

New tools are needed

In addition to these legitimate governance concerns, lack of familiarity with cloud computing is another worrisome factor. That may dissipate as cloud computing moves into the mainstream, but that might not occur for a while.

"As cloud computing and SOA continue to converge, the need for a governance strategy, and good governance technology, will become more important," says David Linthicum, founder of the Linthicum Group, a SOA and cloud consultancy. "However, most of my clients are still kicking the tires around cloud computing, including creating strategy, and doing small projects to validate the infrastructure change. This will change quickly as we

"One risk would be that people start jumping into cloud and external-service consumption piecemeal, without it being governed or managed centrally."



Dana Gardner
Interarbor Solutions

move towards the end of 2009, when more business processes, applications and information will reside on remote clouds, and thus the need for governance increases."

To the extent that enterprises are adopting cloud services, it is via a selective outsourcing of specific applications and infrastructure. One of the principal cloud/SOA governance decisions is determining which services to source from which public clouds, so as to avoid unnecessary duplication with internal application environments.

"The larger business decisions really are around which services should or shouldn't be sourced in a certain way, and what level of comfort and risk aversion are acceptable," says Dana Gardner, principal analyst at Interarbor Solutions. "One risk would be that people start jumping into cloud and external-service consumption piecemeal, without it being governed or managed centrally."

He adds, "The other risk might be that you are so clamped down, that no one takes advantage of efficiencies that become available through the cloud. You then have unfortunate costs and an inability to adapt quickly."

IT execs should expect to see SOA governance tools enter the market over the next several years, addressing a pent-up demand

among enterprise IT professionals. "As IT strategists look over the horizon to what they some day would like to do with cloud computing, they can begin to set themselves up for success on that front now," Gardner says. "Moving toward SOA best practices and implementing strong governance across IT services and resources is an excellent place to gain advantage over today's IT, while preparing for newer models and efficiencies."

Clouds complicate SOA governance

For all the hype surrounding cloud services, it's difficult to find case studies of effective SOA governance in this brave new environment. Nevertheless, most public cloud service providers offer governance tools for managing applications, virtual machines, integration logic and service levels deployed in their specific environments. And a growing range of vendors — including RightScale, Kaavo and Hyperic — are providing tools for provisioning and managing services across various public and private cloud environments.

However, as befits the immature state of cloud computing, none of the established SOA governance tool vendors supports management of cloud-based applications, transactions, messaging or service levels.

Furthermore, even as cloud services become more mainstream, and even if they were built from the ground up with SOA governance in mind, they would still be very challenging to manage. This difficulty stems from some hallmarks of this new paradigm: outsourcing service providers, proprietary public clouds, virtualized resource pools and mashup-style service creation.

Comprehensive SOA governance depends on having all application, platform and network domains under common policy-based administration or having instituted federation among autonomous domains.

Managing SOA federations within an enterprise or B2B supply chain can be dauntingly complex. But managing SOA federations that link internal application domains with those provided by one or more outsourcers — including public cloud service providers such as Amazon, Google, Microsoft and Salesforce.com — depends on negotiation skills worthy of a Nobel Peace Prize.

Federated clouds would help

"Public cloud providers are gingerly approaching the notion of federation," says Rich Wolski, professor in the Computer Science Department at the University of California, Santa Barbara (UCSB) and director of Eucalyptus, an open source, cloud computing software project. "There's not much federation yet between public clouds, but we're starting to see some discussion of cross-cloud federation for the provisioning of resources."

Wolski stresses that as the cloud computing market works through the myriad federation issues, service providers and their enterprise customers will need to establish multi-layered agreements that span identity management,

See Clouds, page 28

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service-level management, storage management and other key concerns.

Right now, there is little to no policy federation between enterprise SOA environments and public cloud services. Enterprises that choose to rely on public cloud services are running a considerable risk, according to Christopher Crowhurst, vice president for architecture and business systems infrastructure at Thomson Reuters.

"You're vulnerable to the provider's performance when you run your infrastructure and applications in someone else's cloud," Crowhurst says. "In those circumstances, there is little onus on the public cloud provider to coordinate their scheduled downtime with subscribers. And it's risky business to build applications that depend on services provided by the public cloud when there is no prior agreement on stability or availability of their API." Even if the public cloud APIs remain, the behavior of those interfaces may change without notice," Crowhurst says.

He advises enterprise IT professionals to negotiate governance features into their contracts with public cloud service providers. These contracts should include clauses under which public cloud providers must inform customers of downtime, service changes, rollouts, version deprecations and API modifications.

One key SOA tenet is that a distributed application environment should be platform-agnostic, and so should its governance infrastructure. Under pure SOA, the external API should be agnostic to the underlying platforms.

However, enterprise forays into cloud computing often violate that principle by relying on monolithic public-cloud services, most of which implement proprietary APIs, development tools, virtualization layers and governance features — though many cloud services also incorporate open SOA and Web 2.0 standards to varying degrees. Interoperability among proprietary public clouds is often nonexistent, and tools for governing services across diverse public and private clouds are just now coming to market.

To enable design-time cross-cloud service portability, public cloud providers should implement open industry standards for packaging of virtualized services," says Billy Marshall, founder and chief strategy officer of virtualization tool vendor rPath. "If we can define service compliance with an open virtualization format, then we'll be able to define service governance that is independent of the host," Marshall says.

One specification that addresses this need is the Open Virtualization Format (OVF), a Distributed Management Task Force (DMTF) draft, which defines an extensible format for the packaging and distribution of software to be run in virtual machines (VM), such as those at the heart of public and private clouds. Though it is a key specification for portability of VMs across clouds, OVF still in Version 1.0, does not provide the full context on VM "images" that would be necessary to support

sophisticated life-cycle governance of these key artifacts, says Brett Adam, vice president of engineering at rPath.

VM sprawl adds further complexity

Most SOA governance environments just skim the surface of enterprise IT environments: managing only that subset of services operating in the application layer, and only those Web services built on XML, SOAP, WSDL and other core SOA specifications. By contrast, many public cloud services provide a deeper stack of on-demand services, spanning the application, software platform, integration middleware and even hardware layers. Indeed, virtualized, grid-oriented "hardware as a service" resource pools are a popular cloud offering.

By proliferating services far deeper down into the stack, beyond the capabilities of SOA governance tools, cloud environments are making unified planning, design, provisioning, monitoring and control of all services next to impossible.

One key area where cloud governance differs from traditional SOA is in its focus on life-cycle governance of VMs. To facilitate automated provisioning of deep application and integration stacks on VMs, cloud management environments should offer prepackaged "server templates," says Michael Crandell, CEO of cloud management platform vendor RightScale.

These templates embed prepackaged policy definitions that govern important life-cycle service VM governance functions, including deployment, setup, booting, monitoring, control, optimization and scaling of VMs on one or more public or private clouds. Cloud governance even encompasses the periodic need to "decommission and throw away" old VM instances, and launch new ones in their place, Crandell says.

Indeed, this could prove to be the killer application for cloud governance: preventing the unchecked proliferation of VM instances. This problem, also known as "VM sprawl," can present both a maintenance burden and could consume inordinate, costly amounts of cloud CPU, storage and network resources.

A growing range of commercial management tools provide the ability to control VM sprawl across disparate hypervisors. In addition, the hypervisor platform vendors, such as VMware, Citrix and Microsoft, and public cloud services providers have made this the principal feature of their various management tools. Sometimes referred to as "instance management," it's a feature that is lacking from traditional SOA governance tools.

Traditional SOA-style development is top-down. It requires considerable upfront architectural design, factoring functional primitives into platform-independent, loosely coupled service contracts that are exposed to developers through open Web services standards. It often also includes a core service catalog, such as UDDI to broker abstract service contracts, as well as tools and platforms that support key interface standards such as WSDL and SOAP.

By contrast, cloud services encourage a grass-roots style — often known as Web 2.0, Web Oriented Architecture or Representational State Transfer (REST) — of service provisioning, development and management. Anyone with a credit card can sign up for and start accessing cloud services, which may be totally redundant with applications that their companies have deployed internally.

By the same token, anyone with a browser can mash up available cloud service components into applications that may deviate significantly from corporate-standard design patterns — and probably lack the stringent securi-

“You’re vulnerable to the provider’s performance when you run your infrastructure and applications in someone else’s cloud.”

Christopher Crowhurst
Thomson Reuters

ty expected from enterprise-grade services. In the REST paradigm, UDDI, WSDL, SOAP and other WS-* standards are conspicuous in their absence. So it's no surprise that the phrase "mashup governance" gives some SOA professionals anxiety fits and causes others to double over with laughter.

Nevertheless, cloud services can benefit from the many lessons learned by enterprise SOA governance implementers, says Tim Hall, director of SOA products for HP Software and Solutions. "Most important, you need a service catalog that maintains metadata about services and enables you to control development and construction of services and publish visibility and availability of services to consumers."

Federation agreements should be set up to auto-provision service definitions between public clouds and enterprises' SOA, REST and other application environments, Hall says. After all, it's all about the service, he adds. From a macro view, the service can be directly equated to value, its contribution to how the service helps you make money, save money or mitigate risk.

Clearly, SOA governance is maturing as a discipline, while cloud computing — the new galaxy in which services will burst forth — is anything but. Unfortunately, the cloud arena may continue to evolve so fast over the next several years that it will be difficult for consensus service-governance practices to coalesce.

So the outlook for strong service governance in this brave new paradigm remains cloudy, but with scattered patches of promise.

Kobielus is a senior analyst at Forrester Research in Alexandria, Va. The opinions expressed are his own. E-mail him at jko bielus@forrester.com.



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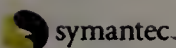


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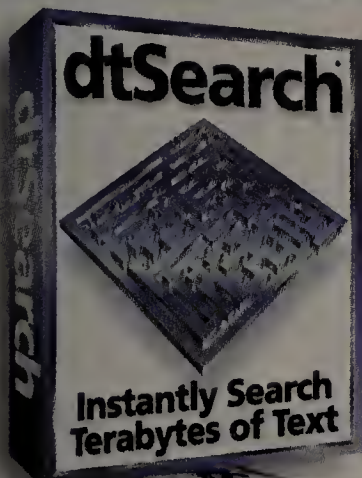
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Juniper

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expects spending to pick back up, but did say that the malaise, as well as current trends in enterprise networking, play to Juniper's strengths.

Customer requirements for "centralized" computing architectures, in which resources are physically housed in data centers and dispersed to remote locations through cloud computing and virtualization, demand the "pure play high performance networking" that Juniper espouses, Johnson said. Juniper says it can lower network operations costs in the data center by 41%, and power consumption by 44% over incumbent systems.

Juniper's data center introductions also are a direct hit on Cisco's ambitions in this market. Cisco — like Juniper — is looking to make the network a centerpiece of next-generation data center architectures. But Cisco also is branching off into the compute space, dominated by longtime partners IBM and HP, with a blade server offering of its own.

Cisco's California blade server, expected in the first half of this year, could strain the company's relationships with IBM and HP. Juniper, meanwhile, stressed that it intends to eagerly partner with data center compute, storage and software vendors to accelerate its ambitions.

"We are going to partner for success in the data center," said Juniper Founder and CTO Pradeep Sindhu at last week's analyst conference.

Sindhu added that the data center needs three advances: a purpose-built, high-performance network; tighter coupling between compute, storage and service elements and the network; and a single management system for policies and virtualization.

"These will not be brought to you by vendors with 70% market share with no interest in upsetting the status quo," he said, in a thinly veiled reference to Cisco.

With that, Juniper unveiled its Stratus Project, a multiyear effort to develop a converged data center fabric with server, storage and software partners. Stratus is a year old and comprised of six elements: a data center manager, storage, compute, Layer 4-7 switching, appliances and networking.

Stratus is intended to be a flat, non-blocking, lossless fabric supporting tens of thousands of Gigabit Ethernet ports, an order of magnitude reduction in latency, no single point of failure, and with security tightly integrated and virtualized. Stratus is expected to support the Converged Enhanced Ethernet data center fabric specifications being defined and endorsed by several vendors.

Stratus will be managed like a large JUNOS-based switch, said David Yen, Juniper executive vice president of the data center business group.

Stratus is designed to relieve data center scaling "pain" because of latency, power, space, cost and complexity, Yen said. It is also intended to



"Our enterprise side is not as surgically focused as we need it to be."

Kevin Johnson
Juniper CEO

support data center virtualization for "elasticity and efficiency," Yen said.

Yen would not provide details into Stratus products, configurations, pricing or availability. He indicated, though, that it will not have a material impact on Juniper's 2009 revenue.

Juniper is announcing Stratus now to allow customers to plan their long-term data center migration strategies, Yen said.

"Stratus extends Juniper's high-performance networking core competencies into the data center," Yen said. "It allows Juniper to enter a new addressable market space. We have no vested interest in prolonging suboptimal legacy architectures. We are in a unique position to revolutionize the data center."

"With one stroke, Juniper is devaluing Cisco's incumbency," says Tom Nolle, president of consultancy CIMI Corp. "They are positioning away from current technologies [such as Fibre Channel and Infiniband] that have no accommodation to the fabric as a network backplane, or as the basis for future virtualization support."

"Cisco has a lot of collisions with incumbents," Nolle adds, referring to the California blade server's anticipated impact on Cisco's relationships with IBM and HP. "Juniper cannot hope to match Cisco in breadth so it is making that an asset instead of a liability. Juniper is timing its success with Stratus to the economy's recovery and to developing symbiosis with partners."

Other analysts wanted more meat to it.

"It was long on vision and short on details," says Zeus Kerravala of the Yankee Group. "They threw this vision out there with no kind of road

map on how to get there. With the installed base of Fibre Channel and Infiniband, there's a staged approach that they're going to have to go through to get there."

But they did lay out some new data center products. Juniper unveiled a top-of-rack data center switch targeted at high-density 10G Ethernet deployments.

The EX2500 provides server access with 24 10G Ethernet SFP+ ports and 700 nanosecond latency. The fixed configuration switches support 480Gbps full duplex throughput in a 1 RU footprint. All ports are non-blocking, Juniper says.

The EX2500 will go up against Cisco's Nexus 5000, Woven Systems' TRX 200, Arista's 7124S, HP ProCurve's 6600 24-VG, Blade Network Technologies' G8100, Force10's S2410 and Extreme Networks' Summit X650.

The EX2500 supports both back-to-front and front-to-back cooling to accommodate server designs for hot- and cold-aisle layouts. This enables network ports to have closer proximity to server ports and keep cable lengths short and manageable, Juniper says.

The EX2500 has redundant power and fans. Power supplies are load sharing and fans are variable-speed, Juniper says. The variable speed fans will automatically adjust speed under variant conditions to reduce power consumption, the company said. The EX2500 will be available in the second quarter starting at \$18,000.

The data center initiatives are part of an attempt by Juniper to further hone its enterprise strategy. The company is winning some enterprise converts — 30% to 40% of its EX LAN switch base are first time Juniper customers, Johnson said — and it has tallied \$33 million in EX switch revenue since unveiling the products a year ago.

And sales to the enterprise market now account for 31% of Juniper's revenue.

Still, "our enterprise side is not as surgically focused as we need it to be," Johnson said. Juniper officials at the conference said the cost of sale to the enterprise is high; and that sales and marketing need to be better connected. ■

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BACKSPIN

Mark Gibbs

Computers and five kinds of insanity

I wrote last week about New Zealand's insane copyright legislation that would make people accused of content piracy guilty until proven innocent. Over the last few days I've been marveling at how that seems to be consistent with the general level of insanity that surrounds the digital world. Here are a few examples of that craziness:

First, how about Apple turning down the "South Park" iPhone application? Apple makes episodes of "South Park" available through the iTunes Store but in the company's quest to, presumably, keep the cell phone world clear of corrupting influences, it has refused to include the application, deeming it to be "potentially offensive." This, from the company that makes Wu-Tang Clan albums available for download to iPhones? This is commercial insanity.

Next we have Michael Torchia, billed as "America's Lifestyle Coach", who got a ridiculous amount of press for his lawsuit against Nintendo and its Wii game console. Torchia claims that the Wii Fit and Wii Balance Board are physically dangerous and that people are getting hurt. Torchia also claims that Nintendo is misrepresenting the products as replacements for exercise and wants the company to pull the games until it makes "important changes in their products."

As crazy and self-serving as this might be there's no way to ignore Torchia until he goes away or gets some kind of settlement out of Nintendo. This is litigation insanity.

How about Facebook management recently trying to change their Terms of Service (TOS) so anything you post on Facebook becomes theirs to do with as they please forever? Now, it was always the case that while you were a Facebook member they could make merry with your content, but if you removed your content or closed your account

under the old TOS their rights vanished.

The new terms were, not surprisingly, universally loathed and a huge wave of user complaints forced Facebook management to return to the previous TOS "while we resolve the issues that people have raised."

You have to wonder what Facebook was thinking. It should have been obvious that revising the TOS so it no longer represented the interests of the users would result in a firestorm. That was public relations insanity.

Want more? The U.K. government, which has the highest level of video surveillance in the world, has passed legislation that becomes law in March requiring ISPs to keep the headers (not the content) of all e-mail that passes through their networks for up to one year.

Something like 3 trillion e-mails are sent in the United Kingdom every day and at the very least both the sending and receiving SMTP servers will have to keep copies of the headers. This means that U.K. ISPs will be responsible for what I estimate to be at least an extra 1.42 exabytes of storage.

Assuming a cost of, say, \$5 per gigabyte per year, the U.K. ISP industry will be forced to spend an extra \$7.5 billion per year on this exercise. Worse still, that figure doesn't include the costs of e-discovery processes, database and management overheads, and so on. This is economic insanity.

Then there are the privacy issues the U.K. law creates, which are similar and as dangerous as the ones that were raised with the U.S. warrantless wire tapping under the Bush administration. This is bureaucratic and political insanity.

We live in strange, turbulent times. I wonder if the insanity is a product of the times or vice versa?

Tell backspin@gibbs.com what are the voices are telling you.



Paul McNamara

NETBUZZ

News, Insights, oddities

40% of geeks really work ... how little?

I had been meaning to write about this Slashdot poll, but other work kept getting in the way. As you'll see from the survey results, not everyone can claim that excuse ... at least not with a straight face.

The poll asked a single question: "How many hours do you REALLY work each day?" (The emphasis, added by Slashdot, is critical here.)

Counting the 10% who do not work at all (unemployed, part-timers, retirees, indepen-

dently wealthy and cannily slothful, I presume) a full 40% reported toiling fewer than four hours per day.

As you're digesting that nugget, know that more than 27,000 Slashdot readers participated in this survey; so, while I have always been dismissive of online polls, this one offers a substantial number of respondents drawn from a pool that overlaps considerably with *Network World's* readership.

OK, so how many of you want to cop to working four hours or less? (C'mon, I won't tell.)

Another 24% pegged their real work hours at a not-all-that-much-more-imposing four to six. Sixteen percent claimed the standard seven to eight, while another 11% went two hours better.

And the self-described workaholics? Three percent punched the clocked at 11 to 12 hours per day and another 3% rounded out the survey at more than 12.

A problem with the survey — in addition to its unscientific methods and the unmasking of massive workplace laziness — is that respondents had a difficult time agreeing on exactly what was being asked. However, the resultant discussion was both enlightening and amusing. I've read through all 252 comments — hey, it's my job — so that you won't have to.

There were those whose answer would depend on who is doing the counting.

"A huge part of my workday is reading technical material. I do that from home and usually have browser tabs open to Slashdot, various support forums, and usually a mainstream news page. I often work in the same clothes I slept in. So how many hours a day am I really working? 10 or more if you ask me. My fiancé will give quite a different number."

There were many of the "depends on your definition" variety.

"I define 'work' as anything that needs to be done, but I don't like doing I don't like beer, and I've never smoked pot, so I guess anything other than sex is work for me. Although I love fixing computers, so even though I get paid for it, I don't really consider it work."

There were those who see employers keeping score.

"Usually 9-10 per day. If anyone isn't pulling an equal amount of the load around here, they have a bull's eye on them for the next round of layoffs. In fact, at this point, anyone working less than nine is pretty much a guaranteed casualty."

There was the obligatory "Office Space" reference.

"Yeah, but if you could go ahead and come in on Sunday, too, that would be great, yeah."

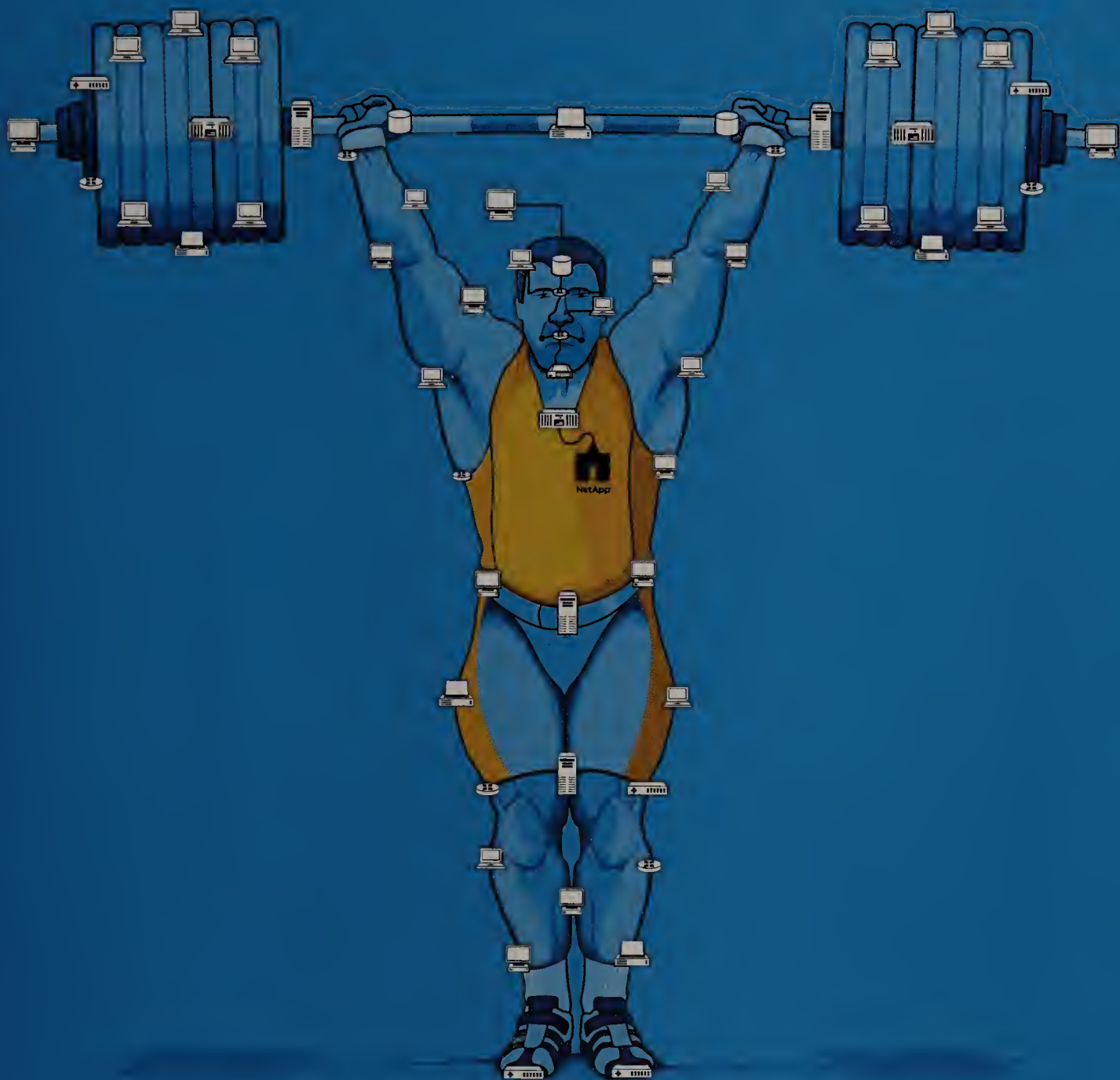
And a lot of veering off on tangents.

"That said, a careful study of my past shows that 40% of my 'sick' days have been taken on either Monday or Friday." (Yes, that's 40% of the work week, as Buzzblog readers noted.)

OK, I know what you're asking now: How many hours a week do I really work?

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